LISTING OF CLAIMS

1-14.   (Cancelled).

15.   (Currently Amended) A method for mining data of a database, comprising:

identifying transaction items of the database and determining an occurrence frequency for each item**, wherein determining the occurrence frequency includes:**

scanning a first portion of the database;

identifying transaction items of the first portion of the database with an occurrence frequency at least equal to a threshold value;

scanning a second portion of the database; and

identifying transaction items of the second portion of the database with an occurrence frequency at least equal to the threshold value;

locking the identified transaction items to prevent other data mining processes from selecting the identified transaction items;

building a probe structure based on the identified frequent transaction items **with an occurrence frequency at least equal to twice the threshold value**;

building a plurality of disjoint branches for the probe structure, wherein each branch of the probe structure includes a number of identified transaction items selected based on content of the transaction items and the occurrence frequency of the transaction items, at least two branches includes a common transaction item, and each of the plurality of disjoint branches are capable of being **executed** independently from the other plurality of disjoint branches;

building a frequent pattern tree (FP-tree) from the branches of the probe structure;

grouping the branches of the ~~probe structure~~ **FP-tree into a plurality of groups, the**

grouping based on the content of the transaction items of each branch, **wherein the number of**

transactions in each of the plurality of groups is substantially equal;

~~building a frequent pattern tree (FP-tree) from the branches of the probe structure;~~ and

assigning, via a master processor, each **group of** branch**es** of the FP-tree to one of a

plurality of slave processors, the plurality of slave processors to execute the transaction items

identified by the respective branch in parallel with each other, wherein the number of transaction

items to be executed by each of the plurality of slave processors is substantially equal.

16.   (Cancelled).

17.   (Original)   The method of claim 15, further comprising building the probe structure to

include a probe tree and probe table, and using the probe tree and probe table to build the FP-tree

for mining the FP-tree to determine frequent data patterns.

18-19. (Cancelled).

20.   (Previously Presented)   The method of claim 15, further comprising partitioning the

database according to content of the identified transaction items to obtain the probe structure,

wherein the probe structure includes combinations of the identified transaction items and the

number of occurrences of one or more content-based transactions.

21.   (Currently Amended) A computer-readable non-transitory storage medium having stored thereon instructions, which when executed in a system operate to manage data of a database by:

identifying transaction items of the database and determining an occurrence frequency for each item**, wherein determining the occurrence frequency includes:**

scanning a first portion of the database;

identifying transaction items of the first portion of the database with an occurrence frequency at least equal to a threshold value;

scanning a second portion of the database; and

identifying transaction items of the second portion of the database with an occurrence frequency at least equal to the threshold value;

locking the identified transaction items to prevent other data mining processes from selecting the identified transaction items;

building a probe structure based on the identified frequent transaction items **with an occurrence frequency at least equal to twice the threshold value**;

building a plurality of disjoint branches for the probe structure, wherein each branch of the probe structure includes a number of identified transaction items selected based on content of the transaction items and the occurrence frequency of the transaction items, at least two branches includes a common transaction item, and each of the plurality of disjoint branches are capable of being **executed** independently from the other plurality of disjoint branches;

building a frequent pattern tree (FP-tree) from the branches of the probe structure;

grouping the branches of the ~~probe structure~~ **FP-tree into a plurality of groups, the grouping** based on the content of the transaction items of each branch, **wherein the number of transactions in each of the plurality of groups is substantially equal**;

~~building a frequent pattern tree (FP-tree) from the branches of the probe structure;~~ and

assigning, via a master processor, each **group of** branch**es** of the FP-tree to one of a

plurality of slave processors, the plurality of slave processors to execute the transaction items

identified by the respective branch in parallel with each other, wherein the number of transaction

items to be executed by each of the plurality of slave processors is substantially equal.

22.   (Previously Presented) The computer-readable non-transitory storage medium of claim

21, wherein the instructions, which when executed in a system operate to manage data of a

database further by building the probe structure to include a probe tree and probe table, and using

the probe tree and probe table to build the FP-tree for mining the FP-tree to determine frequent

data patterns.

23.   (Cancelled).

24.   (Currently Amended) A system comprising:

    a master processor;

    a plurality of slave processors;

    a database; and

    software to

        identify transaction items of the database and determine an occurrence frequency

for each item**, wherein determining the occurrence frequency includes:**

        scanning a first portion of the database;

identifying transaction items of the first portion of the database with

an occurrence frequency at least equal to a threshold value;

scanning a second portion of the database; and

identifying transaction items of the second portion of the database

with an occurrence frequency at least equal to the threshold value;

lock the identified transaction items to prevent other data mining processes from

selecting the identified transaction items;

build a probe structure based on the identified frequent transaction items **with an**

occurrence frequency at least equal to twice the threshold value;

build a plurality of disjoint branches for the probe structure, wherein each branch

of the probe structure includes a number of identified transaction items selected based on

content of the transaction items and the occurrence frequency of the transaction items, at

least two branches includes a common transaction item, and each of the plurality of

disjoint branches are capable of being **executed** independently from the other plurality of

disjoint branches;

build a frequent pattern tree (FP-tree) from the branches of the probe

structure;

group the branches of the ~~probe structure~~ **FP-tree into a plurality of groups, the**

grouping based on the content of the transaction items of each branch, **wherein the**

number of transactions in each of the plurality of groups is substantially equal;

~~build a frequent pattern tree (FP-tree) from the branches of the probe structure;~~

and

assign, via a master processor, each **group of** branch**es** of the FP-tree to one of a plurality of slave processors, the plurality of slave processors to execute the transaction items identified by the respective branch in parallel with each other, wherein the number of transaction items to be executed by each of the plurality of slave processors is substantially equal.

25.   (Cancelled).

26.   (Previously Presented) The system of claim 24, the software to further

build the probe structure to include a probe tree and probe table, and

use the probe tree and probe table to build the FP-tree for mining the FP-tree to determine

frequent data patterns.

27.   (Previously Presented) The system of claim 24, the software to further partition the

database according to content of the identified transaction items to obtain the probe structure,

wherein the probe structure includes combinations of the identified transaction items and the

number of occurrences of one or more content-based transactions.